

CLAIMS:

1. **Filling device** for a writing instrument having a storage reservoir (6, 6a) in a housing (1; 8, 7) for a refilling liquid, wherein a wick-like portion of a writing tip (2) exposed on one end (7) of the housing (1) projects into the storage reservoir (6),
wherein a filling spout (4) for the liquid is attachable to the other end (8) of the housing (1) and a movable dosing cap (5) is provided on the filling spout (4), to expose at least one filling opening (14, 14a, 11) for supplying the liquid **prior to reaching** an end position of the dosing cap.
2. **Filling device** for a writing instrument - refillable with a liquid - having a main reservoir (6) arranged in a housing (1), wherein a wick-like portion of a writing tip (2) exposed on one end (7) of the housing (1) projects into the reservoir (6),
wherein the filling device (4) has at least one radially directed opening (11, 14, 14a) for filling the liquid and a cap (5) is provided which is axially displaceable between position which exposes the filling opening (11, 14, 14a) and position which closes the filling opening (25).
3. Filling device according to Claim 1 or 2, characterized in that the filling spout (4) is insertable (15) into the end of the housing (8) to form a seal via an essentially cylindrical portion.
4. **Filling spout** (4) for a filling device according to Claim 1 or 2, characterized in that a dosing cap (5) is arranged on the filling spout (4) to be movable, particularly axially displaceable, but is arranged captive (11a, 11b; 16a, 16b).
5. Filling device according to one of Claims 1 through 4, characterized in that the cap is implemented in a sleeve shape as a dosing cap (5) and is closed for liquid at one free end (9), and particularly has two essentially diametrically opposing radial filling opening windows (11; 11a, 11b) which have only a limited axial extension.

6. Filling device according to Claim 5, wherein the lateral filling opening windows (11) are dimensioned in regard to an open axial filling end (14) of the filling spout (4) and an axial opening path (25) of the filling cap (5) in such a way that they expose the filling end (14) of the filling spout (4) at latest in the filling position, preferably earlier.
7. Filling device according to one of Claims 1 through 6, characterized in that the filling spout (4) has a catch cam (16; 16a, 16b) - engaging in at least one lateral window (11a) of the dosing cap (5) - which determines **the filling position**, as the end section of the housing (1, 8) near its filling end (18).
8. Filling device according to one of Claims 1 through 7, characterized in that the filling spout (4) has a shoulder-like sealing section (20) on its external filling end (14) which contacts a corresponding internal shoulder region (21) of the dosing cap (5) - determining **the closed position** - to form a seal when the dosing cap is closed.
9. Filling device according to Claim 1 or 2, wherein the filling cap (5) is axially movable, particularly displaceable (25), between two end positions on the spout (4).
10. Filling device according to Claim 1 or 2, wherein the filling opening (11, 14, 14a) is composed of a radial section and an axial section for the extension into the reservoir (6, 6b).
11. Filling device according to Claim 1 or 2, wherein an axially extending container section (12) for transitional storage of a dosing volume (12') of the liquid is provided between the window (11) and an end section (9) of the cap (5).
12. Filling device according to Claim 8, wherein a transitional reservoir (12) to accommodate a dosing volume (12') is located between the sealing section (20) and a free end (9) of the cap.

13. Filling device according to Claim 1 or 2, wherein a ventilation opening (14b) is provided next to at least one axial section of the filling opening (14a) for air (L) to flow back as liquid (W) flows forward.
14. Filling device according to Claim 1, 2, or 13, wherein the filling spout (4) has a first section (4a) pointing toward the main reservoir (6), which is tapered in relation to a second section (4b, 15) pointing toward the dosing cap (5), in particular has a reduced diameter or is stepped.
15. Filling device according to Claim 14, wherein an opening (14b), which extends to a limited extent around the circumference, is provided in a transitional section between the tapered section and the second section for pressure equalization during filling.
16. **Method** for filling a writing instrument having an internal reservoir space (6) in a housing (1, 8, 7), for accommodating and storing a writing material, which, by supplying a liquid and dissolving pigments stored in the reservoir space, is produced or is supplemented, replenished, or completed and is stored in the reservoir space, wherein
 - (i) a cap (5, 12, 9) is guided movably on the instrument housing (1);
 - (ii) the cap is moved from a closed position and exposes at least one window (11a, 14; 11b, 14) during the movement (25) before reaching a filling position, the cap still being held on the writing instrument in the filling position (16, 23);
 - (iii) to allow a partial volume of liquid to be filled into a receiving portion (12) of the cap through the at least one window (11, 14) and be temporarily stored (12'); and
 - (iv) to close the at least one window (11a, 14) by moving the cap back into the closed position;to prepare an essentially complete accommodation of the partial volume from the transitional storage (12') into the internal reservoir space (6) after the writing instrument is pivoted.

17. Method according to Claim 16, wherein, **before** the complete closing by reaching the closed position or as the cap (5, 12, 9) is moved back into the closed position, the temporarily-stored partial volume in the receiving section (12) is brought closer to the internal reservoir space (6).
18. Method according to Claim 16, wherein the window (11, 14) has at least one lateral section (11a, 11b) and one axial section (14, 14a), and the liquid is poured into the transitional reservoir (12) through the at least one lateral window section and is transferred from the transitional reservoir into the internal reservoir space (6) through the axial window section (14, 14a).
19. Method according to Claim 18, wherein, as the liquid is transferred (W) from the transitional reservoir (12) into the main reservoir (6, 6a), air (L) flows back from the main reservoir (6, 6a) through a separate flow path (14b) for pressure equalization.

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